

WHAT IS CLAIMED IS:

1. An ultrasonic diagnostic imaging system including a main body housing imaging electronics and
5 a control panel coupled to the imaging electronics comprising:

a flat panel display electrically coupled to the imaging electronics; and

10 an articulating arm assembly to which the flat panel display is connected for adjusting the viewing position of the flat panel display, the articulating arm assembly including a first arm movably mounted to the main body and a second arm movably connected to the first arm and to the flat panel display, wherein
15 at least one of the arms includes a 4-bar linkage.

2. The ultrasonic diagnostic imaging system of Claim 1, further comprising a wheeled cart on which the main body is mounted.

20 3. The ultrasonic diagnostic imaging system of Claim 1, wherein the second arm includes a 4-bar linkage.

25 4. The ultrasonic diagnostic imaging system of Claim 3, wherein the 4-bar linkage includes first and second pivot axes located at an end of the second arm which is connected to the first arm, and third and fourth pivot axes located at an end of the second arm
30 which is connected to the flat panel display.

35 5. The ultrasonic diagnostic imaging system of Claim 1, further comprising an inter-arm locking mechanism, located on the first and second arms, which acts to lock the two arms together, thereby

restricting relative motion between the two arms.

6. The ultrasonic diagnostic imaging system of
Claim 5, wherein the locking mechanism further
comprises a user-operated lock release which is
operated to cause the locking of the two arms to be
released.

7. The ultrasonic diagnostic imaging system of
Claim 1, wherein the articulating arm assembly
further includes a first vertical pivot axis located
at an end of the first arm which is movably mounted
to the first body, and a second vertical pivot axis
located at an end of the first arm which is connected
to the second arm.

8. The ultrasonic diagnostic imaging system of
Claim 7, wherein the articulating arm assembly
further includes a third vertical pivot axis located
at an end of the second arm which is connected to the
flat panel display, and a horizontal pivot axis
located at the end of the second arm which is
connected to the flat panel display.

9. The ultrasonic diagnostic imaging system of
Claim 7, wherein the arc of travel of the first arm
about the first vertical pivot axis is constrained to
be less than 360°, and wherein the arc of travel of
the second arm about the second vertical axis is
constrained to be less than 360°.

10. The ultrasonic diagnostic imaging system of
Claim 1, wherein the second arm includes a 4-bar
linkage, and wherein the second arm further includes:
a pneumatic piston which acts to provide a force

which at least partially offsets the weight of the flat panel display.

11. The ultrasonic diagnostic imaging system of
5 Claim 10, further comprising an adjustment mechanism,
coupled to the pneumatic piston, which is operable to
adjust the force provided by the pneumatic piston.

12. The ultrasonic diagnostic imaging system of
10 Claim 11, wherein the pneumatic piston is adjusted to
provide a balancing counter-weight force when the
second arm is oriented in a horizontal orientation.

13. The ultrasonic diagnostic imaging system of
15 Claim 1, wherein the first arm exhibits a fixed
upward inclination from an end which is connected to
the main body to a second end which is elevated above
the connection to the main body, and the second arm
includes a 4-bar linkage.

20 14. The ultrasonic diagnostic imaging system of
Claim 3, wherein the 4-bar linkage includes first and
second upper bars coupled between the first and third
pivot axes and third and fourth lower bars coupled
25 between the second and fourth pivot axes,
wherein the first bar is rigidly connected to
the second bar and the third bar is rigidly connected
to the fourth bar.

30 15. An ultrasonic diagnostic imaging system
having a main body housing imaging electronics
comprising:
a flat panel display electrically coupled to the
imaging electronics; and
35 an articulating arm assembly coupled to the flat

panel display to enable repositioning of the flat panel display, the articulating arm assembly including:

- 5 a first arm exhibiting a fixed inclination from a first mounting end and a second joint end; and
 a second arm exhibiting a variable inclination from a first end which is coupled to the second joint end of the first arm, and a second end which is coupled to the flat panel display.

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16. The ultrasonic diagnostic imaging system of Claim 15, wherein the second arm includes a 4-bar linkage which provides the second arm with the variable inclination.

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17. The ultrasonic diagnostic imaging system of Claim 15, further comprising a first pivot axis located at the first mounting end of the first arm; a second pivot axis located at the second joint end of the first arm, and a third pivot axis located at the second end of the second arm.

25 18. An ultrasonic diagnostic imaging system including a wheeled cart and a main body housing imaging electronics and located on the wheeled cart comprising:

- 30 a control panel located on the wheeled cart and electrically connected to the imaging electronics, the control panel being laterally articulable;
 a flat panel display electrically coupled to the imaging electronics; and
 an articulation mechanism, having a mounting end coupled to the wheeled cart or main body and a second end coupled to the flat panel display, and operable to laterally reposition the viewing position of the

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flat panel display.

19. The ultrasonic diagnostic imaging system of
Claim 18, wherein the articulating mechanism includes
5 first and second articulating arms, at least one of
which includes a 4-bar linkage.

10 20. The ultrasonic diagnostic imaging system of
Claim 18, wherein the articulation mechanism further
includes a plurality of vertical pivot axes which
enable lateral articulation of the flat panel
display, and a 4-bar linkage which enables vertical
articulation of the flat panel display.